

SIgN SEMINAR

Hosted by Dr Katharine YANG



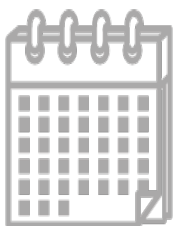
Dr Kok Fei CHAN, PhD

Research Fellow

Olivia Newton-John Cancer Research Institute
Australia

Human $\gamma\delta$ T Cells and Tumor Immunotherapy Development

Dr Chan's current work is focused on understanding the mechanisms of human $\gamma\delta$ T-cell activation and tumor cell killing. His group has defined the molecular aspects of the TCR-dependent activation of $V\gamma9V\delta2+$ T cells by tumors following the presentation of phosphoantigens via BTN2A1/BTN3A1 complexes. Activated human $\gamma\delta$ T cells can undergo rapid expansion of up to 60% of total T cells in the periphery or form up to 30% of infiltrating T cells during the onset of disease, recognize and eradicate a broad range of haematological and solid malignancies in an MHC-unrestricted manner. This allows $\gamma\delta$ T cells to target cancers that have become resistant to conventional treatments due to antigen loss or downregulation. Further, $\gamma\delta$ T cells exhibit an inherent affinity for tumor microenvironment and can orchestrate other tumor-infiltrating immune cells for tumor cell killing. Many clinical studies to date have shown that the presence of high number of $\gamma\delta$ T cells within tumors is strongly correlated with overall patient survival across 39 cancer types. Hence, by understanding and harnessing the potential of activated $\gamma\delta$ T cells, Dr Chan and team can develop more effective combination immunotherapies for cancer patients.



20 February 2025 (Thursday)
10 AM – 11 AM (Singapore Time)

SIgN Seminar Room
8A Biomedical Grove, Immunos, #04-06
Singapore 138648

*Seminar is
open for all
to attend.*

*Registration
is not
required.*

